[redacted] 82-M-9

680291

81/10/03

TO: FILE

RE: GROUNDHOG PROJECT, SITE VISIT 81/09/05,06

The following information was received in hand written letter form from Mr. Gary Bysouth, geologist, after visit to the Groundhog Project area September 5 &6:

" I had a good look at the gold-ore sample collected from Ole Bull, my observations are listed below:

(1) A sample of the quartz vein immediately adjacent to the "crushed" zone we panned contained visible gold (didn't see it until I washed the sample and scrubbed it with a wire brush). Most of this gold was in a sugary porous quartz, but some was in cubic voids in glassy quartz presumably left by dissolved pyrite (could be galena). These voids are widespread, about 15% of the rock volume is made up of these open spaces, in other words the "crushed" appearance of the quartz and adjacent phyllite is due mainly to leaching. Some voids are irregular and could have been carbonate.

(2) The gold-bearing quartz is more clear (approaches glassy quartz) and vuggy or crystalline than the comman bull quartz vein material. This is a classic situation for gold deposition.

(3) The cubic voids containing gold have been interpreted by Gunning (GSC) as possibly due to surface oxidation of pyrite. I totally disagree since the voids are completely free of limonite - a very low acidity is required to prevent limonite deposition (ph≈2). Cubic voids up to 20 feet from the vein where pyrite mineralization was very weak don't even have limonite halos around them. I would suggest some sort of hydrothermal leaching phenomenon was present and this may even have caused the deposition of gold, in other words the leaching of pyrite (cubic voids) without much limonite may be one of the geological indicators of gold mineralization.

(4) Graphite appears to be deposited with the quartz and pyrite and may have been remobilized from the wall rock which appears to contain some graphite. Some of the cubic voids are in the graphite, which proves it was earlier or at least of the same age as pyrite. There is however, a fine black powder associated with the gold which could be redeposited pyrite or graphite or both. An oily scum was obvious on panning this material - this may have been graphite or even some sort of bituminous substance.

(5) About 2/3 of the gold obtained by panning was from uncrushed rock which indicates most of the gold is loosely bound and supports the idea of gold being deposited in vuggy porous rock after leaching.

(6) A golden yellow sericite appears associated with the mineralization, at first I thought it was colliodal gold in sericite but assays were negative.
(7) The washed phyllite adjacent to the vein appears to contain 0.005 oz/ton gold, and I would consider this concentration to be a very positive indication of richer values.

The above observations were made on only a small volume of sample, and therefore at this point not well supported but they do seem to fall in line with other information. The following are some general observations on the local environment, again made from very limited exposures.

(1) The host rock for the Ole Bull and Orphan Boy deposits appears to be a medium grey phyllite with a very characteristic "wrinkle lineation" evident on cleavage planes. It appears to contain 1-2% pyrite as euhedral cubes and about 1-10% opaque material which may be mainly graphite. This rock may have provided a suitable geochemical environment for gold deposition (ie. solution of graphite and pyrite etc.).
(2) The micaeous quartzite unit also has possibilities. This rock is a quartzite with about 3% macroscopic sericite mainly as micaeous partings. Compared with the phyllite, this rock is brittle and a better host for multiple quartz veining which could provide a larger volume of ore. A good "ore trap" could involve the softer, relatively impermeable phyllite overlying the brittle, well-fractured quartzite producing a damming effect in a large volume host rock. In other words, ore could be localized at the quartzite-phyllite contact with most of the volume in the quartzite.
(3) The calcareous unit also has possibilities, Im not sure whether this is a calcareous quartzite or a silliceous limstone, what is important though is the fact that in Barkerville and other gold districts, this rock has provided more massive ore when cut by the normal gold-quartz systems. This is most likely due to the change in the ore-bearing solutions following the solution of the carbonate material. Its obviously a good host for tungsten deposits as well.

at orphan bay and on Graham's Th. side.

The area has a potential for economic gold mineralization (and also tungsten). It would be highly irrational to assume the known exposures are the only places in the quartz vein systems where gold was deposited. Once you assume these occurances belong to actual systems rather than being isolated rootless pods, then it becomes clear that the Ole Bull and Orphan Boy deposits are only "scratches on the surface" of some very large vein systems.

The trick of course is to identify and positively locate the system. To this end I'd strongly recommend geological mapping. I'd then confirm the systems location by bulldozer trenching. Once accurately located, then close interval drilling would be required, possibly percussion drilling since a large volume sample should be used to evaluate gold mineralization. I would also assume the gold distribution would be erratic, and therefore, lower grade values should be regarded as positive indication of better grade material."

I am very grateful to Mr Bysouth and his assistant Mr Oliver for the time they have spent on our behalf in increasing our knowledge of the Groundhog Basin geology and mineralogy.

John A. Chapman
81/10/03

cc J. E. Dagenais
D. W. Philip

J. DAGENAIS.

81/10/04

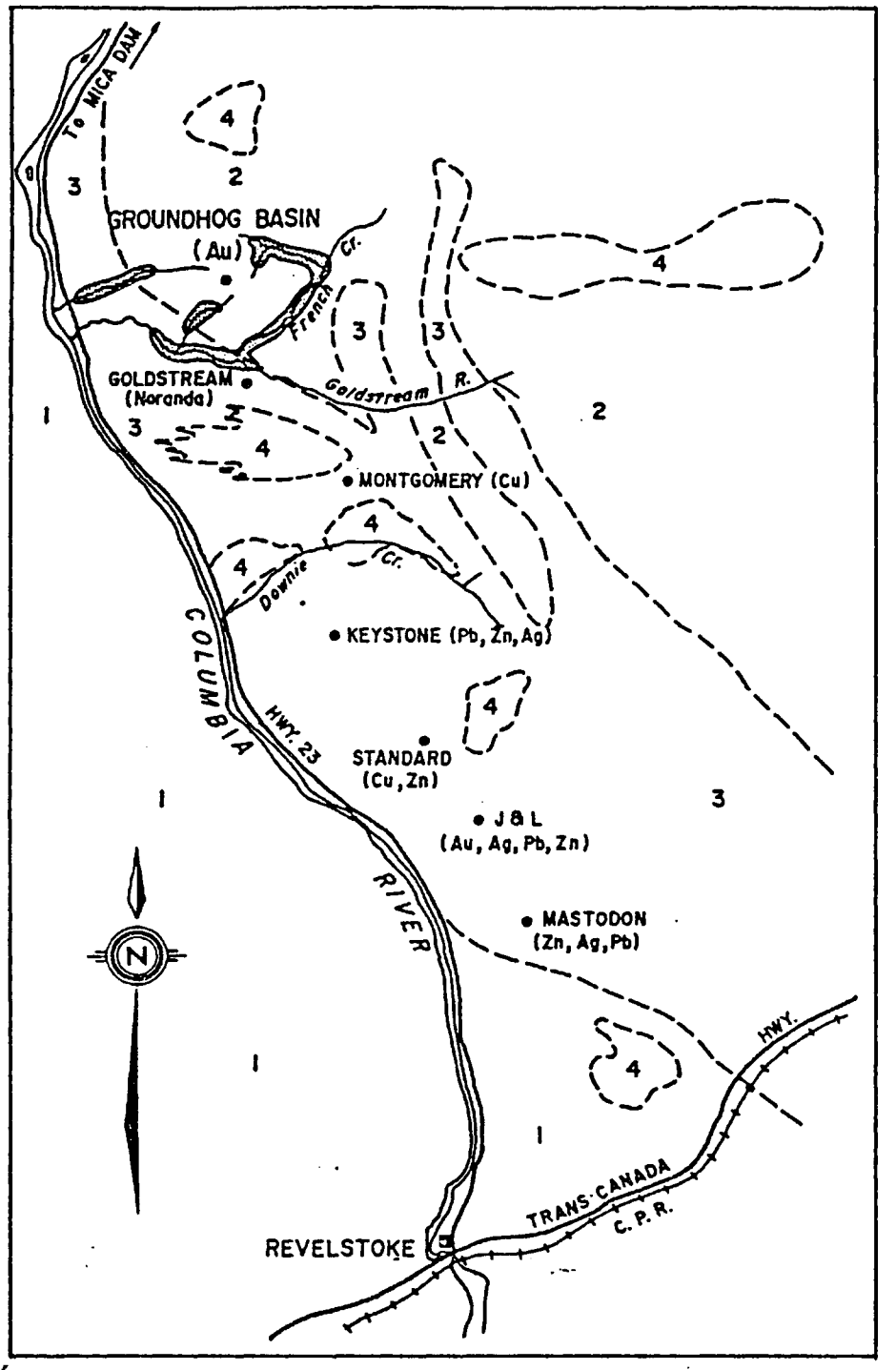
TO: FILE

SUBJECT: GROUNDHOG PROJECT, SITE VISIT 81/09/05,06

On September 5th and 6th messrs. Gary Bysouth, Geologist, Williams Lake B.C., Ed Oliver, Geologists assistant, Williams Lake B.C., and John Chapman, mining engineer, PEng, Calgary, Alberta prospected the Groundhog Project area.
The weather was excellent and all snow was gone. Snow had been a problem during the June and July work program.
On the 5th the Orphan Boy adits were located on both sides of Barret creek. The east adit was blocked but the large quartz lead (3 meters wide) was well exposed. sulfide mineralization was sparse and only indicated pyrite. The Quartz veins were massive "bull" quartz and no porous texture was located. However on the west side the narrow (0.3 meter wide) vein was heavily mineralized with sugary pyrite and a grey powdery mineral. Most of the quartz also had a granular texture- a very "interesting" looking rock. a sample was taken here for analysis.
We then hiked to the Ole Bull shaft to check out Gunnings (GSC) report on gold mineralization being confirmed by panning hardrock samples. A sample was obtained from the footwall of the lower vein - it consisted of a 0.2 meter zone of granular quartz containing a grey powdery mineral as found at the west portal of the Orphan Boy. The rock was easily crushed with a rock hammer against the rock in a gold pan. Upon adding water a thick grey floating mass appeared and sparkled with sulfides, it almost seemed to be an oil scum causing floatation of sulfides. It may have been graphite as it is abundant in the adjoining phyllites. Having started with 1/2 a pan of poorly crushed material the final results were spectacular with 100+ colours of flour gold. Gunnings 1928 work was confirmed! A sample was taken for analysis.
On the 6th we hiked with Robert Westerberg and his friend Jim Mayr over into the Graham Creek valley. We spent most of the day on the north fork looking for Bobs mineral show he had located some seven years before. We were unsuccessful, however there are several very large quartz veins in the creek bed and lots of limonite stain. Even though no mineralization was found the area does warrent a closer look.
Gary Bysouth said he would send us a brief writeup on his observations re the Groundhog Basin geology and minerology.

John A. Chapman
80/10/04

cc D. W. Philip
J. E. Dagenais



LEGEND

4	MESOZOIC GRANITIC ROCKS
3	PALEOZOIC LARDEAU AND HAMILL GROUP
2	PROTEROZOIC HORSETHIEF CREEK GROUP
1	SHUSHAP METAMORPHIC COMPLEX.
	PLACER AREAS
•	DEPOSITS

FIGURE 4

AURUN MINES LTD.
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GROUNDHOG BASIN PROJECT

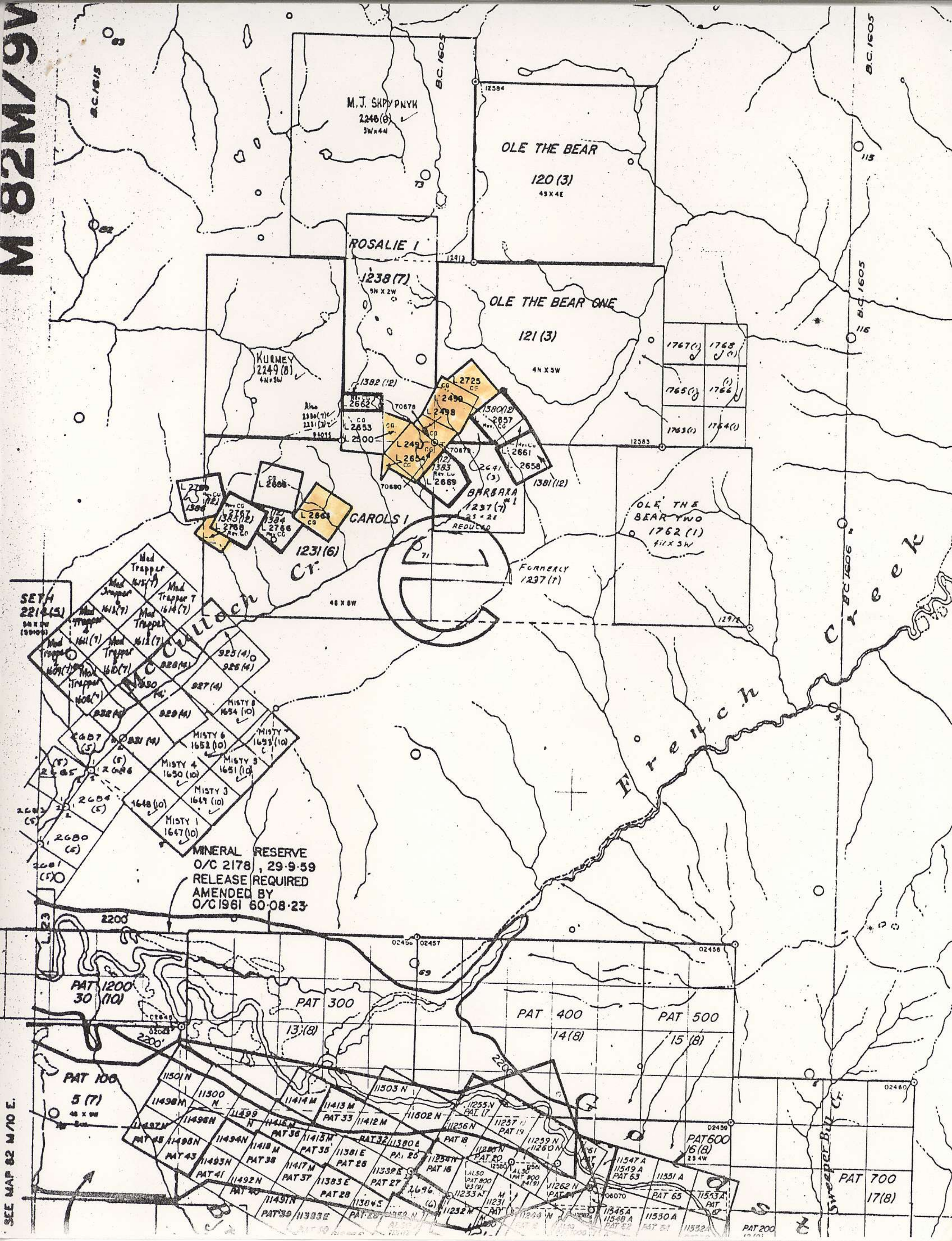
REGIONAL GEOLOGY

AFTER WHEELER (1965)

KILOMETRES

0 5 10 20 30 35

TO ACCOMPANY A REPORT BY A.D. DRUMMOND, P. ENG.



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L 2768
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CAROLS I
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McCulloch Cr.
FORMERLY 1237 (7)
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French Creek
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PAT 700
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Sweeper Bu Cr.
SEE MAP 82 M/10 E.